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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/693,075	10/23/2003	Lalita Satapathy	031344/2912P	2217

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EXAMINER
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ROSSOSHEK, YELENA

ART UNIT	PAPER NUMBER
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2825

DATE MAILED: 11/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/693,075	<b>Applicant(s)</b> SATAPATHY ET AL. 	
	<b>Examiner</b> Helen Rossoshek	<b>Art Unit</b> 2825	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 23 October 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>10/23/2003</u> . | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. This office action is in response to the Application 10/693,075 filed 10/23/2003.
2. Claims 1-26 are pending in the Application.

### ***Drawings***

3. The drawings are objected to because Figure 1 has discrepancy between labeling the boxes in the drawing and description of the Figure 1 in the Specification, such as "Layout Tool" is marked "25" in the drawing and "35" in the Specification (page 2). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

4. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

#### ***Specification***

5. The abstract of the disclosure is objected to because it has typographical error in the line 4: "netlist" should be replaced by netlists with further deleting the word "comprising"; and number of paragraph [0044] has to be deleted. Correction is required. See MPEP § 608.01(b).

6. The disclosure is objected to because of the following informalities: typographical error is appeared on the page 4 line 4: "netlist" should be replaced by netlists with further deleting the word "comprising".

Appropriate correction is required.

#### ***Claim Objections***

7. Claims 1, 14 are objected to because of the following informalities:

claim 1 line 3 after "netlist" insert --s--

claim 1 line 3 after "hierarchical" insert --,--

claim 14 line 4 after "netlist" insert --s--

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 1-26 are rejected under 35 U.S.C. 102(e) as being anticipated by Otaguro (US Patent 6,966,045).

With respect to claims 1 and 14 Otaguro teaches a method for optimizing a netlist change order flow within a method of inserting a repeater cells including reducing the amount of increasing of the netlist (col. 3, ll.37-42), a computer-readable medium containing program instructions for optimizing a netlist change order flow within a computer program product of inserting a repeater cells including reducing the amount of increasing of the netlist (col. 3, ll.37-42), wherein a design layout created by a layout tool from a reference netlist is to be changed by a modified version of the netlist within steps S312, S314, S316 used for creating design layout from netlist 10 (reference) as shown on the Fig. 2, wherein netlist 320 is created as modified version of the original netlist 10 (col. 2, ll.5-10), wherein both netlists are hierarchical by netlist 10 and its modification netlist 320 having hierarchical structure (col. 6, l.30), comprising; (a) comparing the modified netlist with the original netlist outside of the layout tool within

comparing the netlist 320 after inserting a repeater cells with the original netlist 10 outside of the layout tool (col. 2, ll.32-34); (b) automatically generating at least one change order based on differences found between the two netlists by obtaining the differential layout as a result of comparing the original netlist 10 and modified netlist 320 (col. 2, ll.11-13) within step S330 as shown on the Fig. 2, wherein step S330 is processed in the course of the engineering change order (ECO) (col. 2, ll.20-23); and (c) applying the change order to the design layout to generate a modified design layout within ECO process for outputting a final adjusted layout 321 (col. 2, l.22).

With respect to claims 2-11 Otaguro teaches:

Claims 2 and 15: further including the step of: providing a software tool for performing steps (a) and (b) within the netlist reading unit 14 shown on the Fig. 3 (col. 6, ll.20-25);

Claims 3 and 16: wherein step (a) further includes the step of: inputting the reference netlist and the modified netlist into the software tool within the process of comparison two netlists: the original netlist 10 and modified netlist 320 as shown on the Fig. 2 (col. 2, ll.30-33);

Claims 4 and 17: wherein step (a) further includes the step of: comparing the reference netlist and the modified netlist in a flat manner within the process of comparison two netlists: the original netlist 10 and modified netlist 320 as shown on the Fig. 2 and obtaining the differential layout (col. 2, ll.30-33; ll.11-13);

Claims 5 and 18: wherein step (a) further includes the step of: creating flat views for both the reference netlist and the modified netlist within the conventional operation to

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flatten the netlist hierarchically described in order to calculate the mapping information (comparison) (col. 1, ll.56-59; col. 6, ll.30-33);

Claims 6 and 19: wherein step (a) further includes the step of: generating two data structures corresponding to each of the flat views, an instance map and a net map.

Claims 7 and 20: wherein step (a) further includes the step of: maintaining in each of the instance maps a mapping of hierarchical leaf-level instance names and corresponding instance types, wherein modules are excluded within generating a table without consideration the hierarchical structure of netlists since the files are flattened (col. 6, ll.30-35);

Claims 8 and 21: wherein step (a) further includes the step of: maintaining in each of the net maps a list of nets and corresponding pins for the nets across all module hierarchies as shown in the table in the Fig. 4 (col. 6, ll.37-45);

Claims 9 and 22: wherein step (a) further includes the step of: using a top-net is to represent a net across hierarchies and representing the pins for the net as a set as shown in the table of the Fig. 4 (col. 6, ll.37-67);

Claims 10 and 23: wherein step (a) further includes the step of: assuming that a name of the net in the design layout is same as the top-net name (col. 6, ll.57-62);

Claims 11 and 24: wherein step (a) further includes the step of: comparing the flat views of the modified netlist with the flat views of the reference netlist by, (i) sequentially reading and comparing the leaf cells in the instance maps; and (ii) comparing the net map for the modified netlist with the net map for the reference netlist within the process of comparison two netlists: the original netlist 10 and modified netlist

320 as shown on the Fig. 2 and obtaining the differential layout (col. 2, ll.30-33; ll.11-13), wherein the information of the table in the Fig. 4 contains the Information of the names of the respective signals, which is accompanied with pointers to the location of the identification names and the names of the pins of the instances (col. 6, ll.63-67);

Claims 12 and 25: wherein step (b) further includes the step of: generating an ECO in response to any one of the following: 1) a leaf cell is in the reference instance map, but not in the modified instance map; 2) a leaf cell is in the modified instance map, but not in the reference instance map; 3) a leaf cell is in both instance maps, but there is a cell type mismatch within the process of comparison two netlists: the original netlist 10 and modified netlist 320 as shown on the Fig. 2 and **obtaining the differential layout** (col. 2, ll.30-33; ll.11-13);

Claims 13 and 26: wherein step (c) further includes the step of: inputting the change orders into the layout tool to apply the changes and to generate the modified layout as shown on the Fig. 2, wherein the differential layout is obtained and inputted in the layout tool for adjusting the original layout to create an adjusted layout (col. 2, ll.35-41).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Helen Rossoshek whose telephone number is 571-272-1905. The examiner can normally be reached on 7:00-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew S. Smith can be reached on 571-272-1907. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Examiner  
Helen Rossoshek  
AU 2825

**STACY A. WHITMORE**  
**PRIMARY EXAMINER**

A handwritten signature in black ink, appearing to read 'Stacy A. Whitmore', written over the printed name and title.